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DRAFT
CITY OF MAUPIN
STREET DESIGN STANDARDS PROJECT - 1999



Prepared by

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Clint Windom
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Mike Miles, City Public Works Director
Ralph Wimmer

Special thanks to Ed Moore, Senior Planner, Department of Transportation, for assisting the City in developing this plan.

FOREWORD

In early 1998, the City submitted an application for a Transportation Growth Management (TGM) grant to the Oregon Department of Transportation. The purpose of the grant was to assist the City of Maupin in developing street design standards for the future improvement of existing streets in the town as well as new streets associated with new development. The City was awarded the grant to hire a consultant to assist the City in completing the project. However, there were some inconsistencies between what the City anticipated doing and what the TGM grant could fund. The City essentially wanted construction drawings and bid specifications for improvements to all the City streets. The state wanted a local street network plan, a statutorily defined product.

After some discussion, the City and the state moved forward to develop a product in a modified fashion to both address the City's needs and meet the state's basic requirements under the Transportation Growth Management program.

A Technical Advisory Committee was appointed by the City Council and a series of workshops, to review the material prepared by the consultant, were conducted. A public involvement program, attached as Exhibit 1, was prepared and accepted by the Committee.

**CITY OF MAUPIN
STREET DESIGN STANDARDS**

HISTORY OF THE TOWN

The City of Maupin was first inhabited in the 1870s with the arrival of Perry Maupin. Mr. Maupin established a ferry across the Deschutes River at the mouth of Bakeoven Creek. The ferry provides access to south Wasco County, including the areas of Bakeoven, Antelope, and Shaniko. Settlers continued to arrive in the community and the original Town of Maupin Plat was filed in 1910.

A number of individuals and entities operated the ferry service across the river at Maupin over the years. The core area of the town was almost totally destroyed by fire in 1921. It was subsequently rebuilt in the following years into its present form.

The Town is served by US Highway 197 that runs through Wasco County in a north and south direction. The Burlington Northern Railroad runs along the West Bank of the Deschutes River from the mouth of the Deschutes, at the Columbia River, to Madras and Metolius in Jefferson County. For many years, the Town relied for its primary source of employment on a sawmill located on the heights above the platted town. The closing of the mill in 1992 has caused significant economic hardship for the community. Maupin now relies heavily upon tourist activities as its primary source of income. Whitewater rafting on the Deschutes River during the summer months is a major tourist attraction.

The following table shows the population trend in the community from the 1950s to the present.

City of Maupin Population 1950 – 1998	
Year	Population
1950	312
1960	381
1970	428
1980	495
1988	505
1990	456
1993	475
1997	495
1998	490

LOCATION

The City of Maupin is located in Central Wasco County on the banks of the Deschutes River. The City lies approximately 37 road miles south of The Dalles and approximately 52 road miles north of Madras in Jefferson County, see Map 1. The Original Town of Maupin was platted in 1910 in a rectangular grid pattern across a broad ridge that borders the Deschutes River, Map 2. The subdivision plat gave little regard to local topography, Map 3. The original layout of lots and the street pattern created by the plat of Maupin still creates problems today.

The Town's corporate limit encompasses three distinct elevation areas, Map 4. There is the Heights area, or the flats on the upper ridge above the main part of town. Within this area there is a small amount of residential development, the old mill site, the City's water supply and small commercial activities. The main part of town, and a major portion of the original town plat, lies across a broad ridge above the Deschutes River. This area contains the downtown commercial core and the primary residential area of the community.

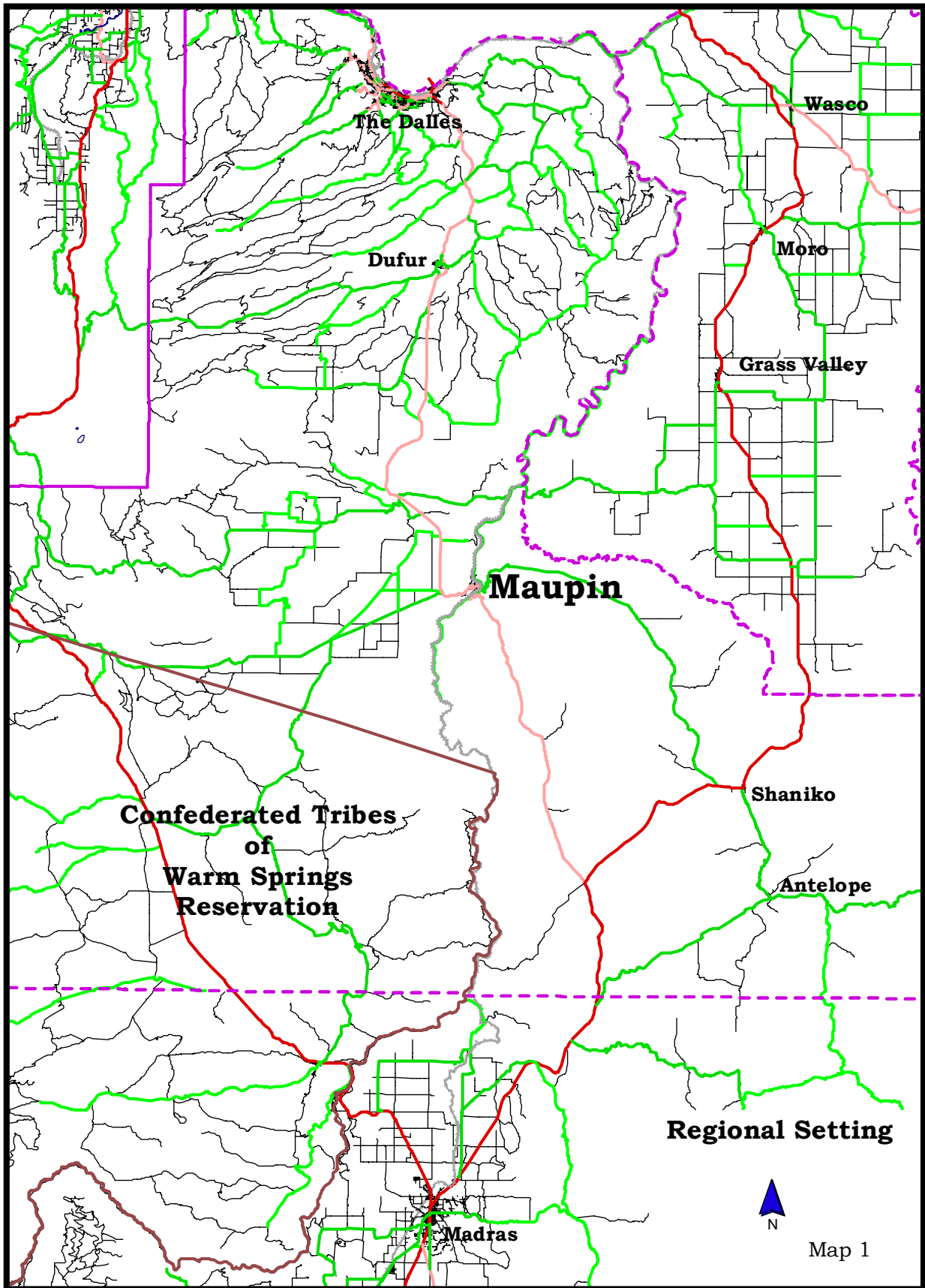
Finally, across the Deschutes River is an area known as East Maupin, which would be better described as South Maupin, when reviewing a City map. This area is bounded by Highway 197, Bakeoven Road, and the Deschutes River. There is a small amount of residential development in this area, however the area is now gradually transitioning into recreational commercial activities to take advantage of the enhanced focus on the river and the upswing in tourism and whitewater rafting.

ACTIVITY CENTERS

Map 4 also shows primary activity centers in the City. The primary traffic generators are the school facilities. Both the grade school and high school are located off of 4th Avenue, north of Deschutes (US 197). This is the main gathering area for the community. There are also two churches, as noted on the map. There is a proposed park on the Heights near the existing Visitor's Center. The Maupin City Park on the Deschutes River is a major tourist attraction and traffic generator during the summer months, mostly with tourist vehicles.

DEVELOPMENT TRENDS

The closure of the Mt. Fir Lumber Company Mill on the Heights in Maupin was a devastating blow to the economy of the City. Maupin has still not fully recovered from this economic setback. The City's population continues to hover just below 500. And only moderate to slow growth in the population is projected over the next 20 years. Wasco County is responsible, under ORS 197.291, to complete a Population Allocation based on the Oregon State Department of Economic Analysis population figures. The County has not yet completed this task therefore a long-term population projection is not available. However based on past and present development trends, there does not appear to be a significant population generator for growth for the City in the foreseeable future.



City of Maupin Wasco County Vicinity Map

Spring



200 0 200 400 600 800 1000 1200 1400 Feet

36 31
1 6

DESCHUTES

M.P. 43.96

THE DALLES-
RIVER

CALIFORNIA
HWY.

RIVER

BLUE ROCK

NO. 4

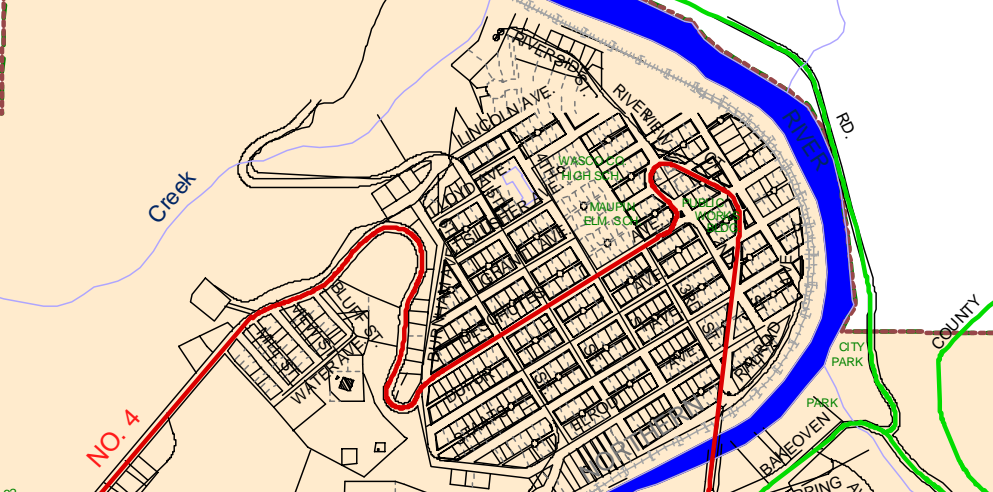
Cambrai

BURLINGTON
RIVER JUNCTION

NATIONAL

ACCESS
STAG

CANYON



East Maupin

M.P. 46.40

M.P. 47.14

M.P. 47.42

THE DALLES-
RIVER

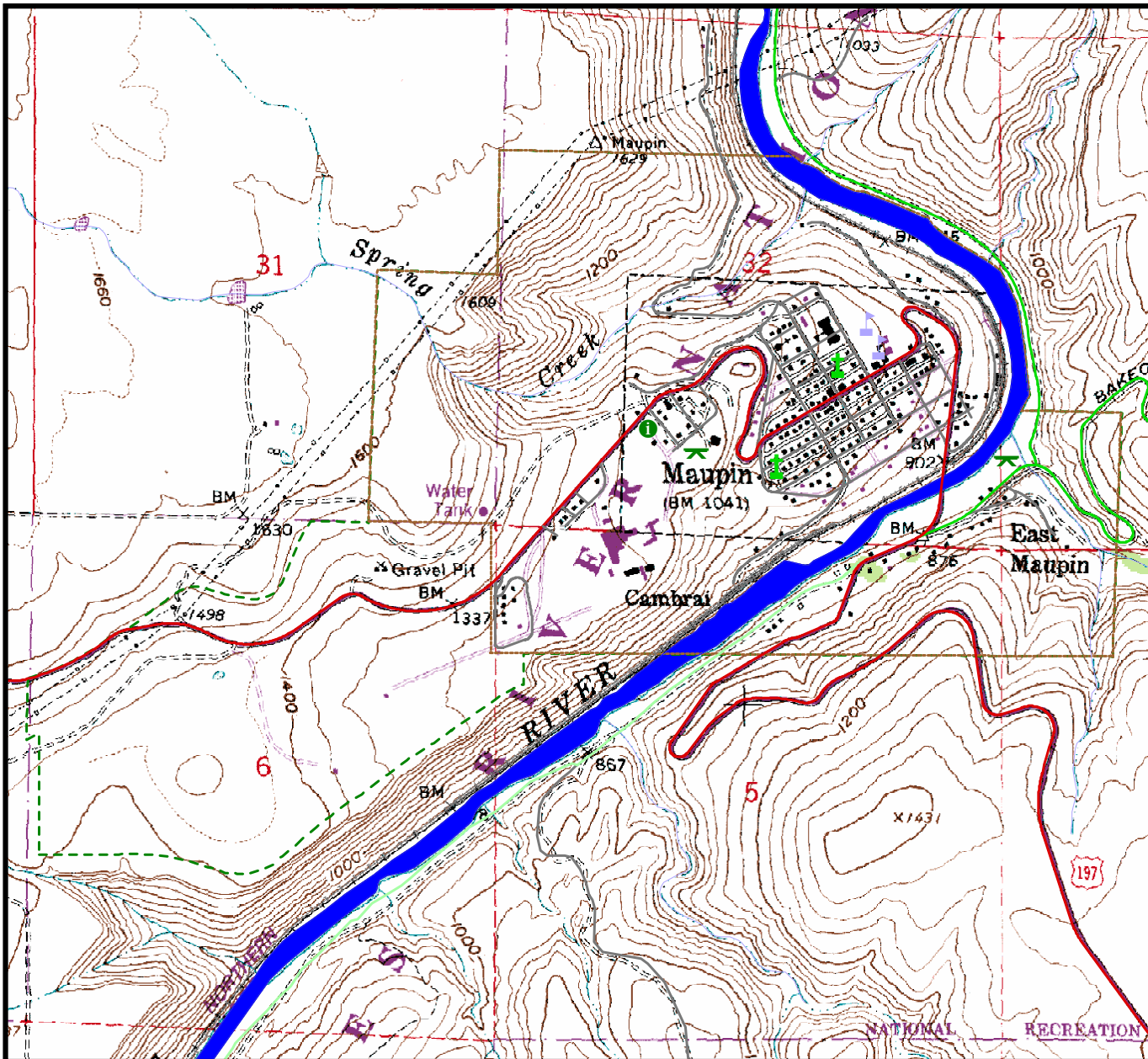
CALIFORNIA
HWY.

RECREATION

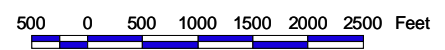
Map 2

City of Maupin Local Street Network Plan

Existing Topography Map



- Roads**
- Local Street
 - Major Collector
 - Minor Arterial
 - Minor Collector
- Other**
- Railroad
 - River
 - Stream
- Boundaries**
- City Boundary
 - Urban Growth Boundary
- Landmarks**
- School
 - Church
 - Park
 - Visitor Center



There have been a number of new homes built along Elrod Avenue in recent years. This particular location provides excellent views of the Deschutes River and was part of the Original Plat of Maupin. There have been two attempts at subdivisions in the City in the last 20 years. Riverview Estates, on the lower east side of Maupin just above the wastewater treatment plant, was approved and platted in the 1980s. However, the market did not respond and full development of this subdivision was never completed. Approximately 5 lots were developed and the rest were vacated. A more recent subdivision, Riverview Crest, located in the Heights on the old mill property proposed 22 lots in the 1990s. The preliminary plat was approved, however a final plat was never filed.

The City has recently annexed a portion of the Urban Growth Boundary containing slightly over 80 acres of Large Lot Residential (LL-R) zoned property. The minimum lot size on this land is 1 acre and a potential development plan is currently being prepared. It is anticipated that this will add 65-70 home sites over the long term.

The only other piece of property that can be readily developed is the old mill site itself where the aforementioned Riverview Crest Subdivision was proposed. All other properties lying on the breaks of the Deschutes have extreme topographic problems and would be difficult to develop at an urban density, if at all.

STREET INVENTORY

The City's streets were reviewed and inspected in the fall of 1998. Essentially every platted street in Town was individually walked and improvements noted and measured. Exhibit 2 contains a tabular analysis and a map of the City's street system.

The Original Town of Maupin plat provides 60 foot rights-of-ways for every street in town with 25-foot alleys between the lots in each block. Highway 197 is also a 60-foot right-of-way. Other areas of the City, including the Heights and East Maupin streets are not necessarily to that right-of-way width and these exceptions are noted on the inventory pages. The actual improvements to each street vary almost on a block by block basis. Exhibit 2 contains a detailed description of the City's street and pedestrian system, along with a map that graphically indicates the extent of the improvement.

STREET IMPROVEMENT TYPES

Almost all of the improved streets in the City are oil mat overlays except where noted on Exhibit 2 as specifically being gravel. The road bases are not specified. There is asphaltic concrete paving on the following streets.

- **Elrod Avenue**
- **Water Avenue**
- **Riverview Drive**
- **Burnham Street**
- **5th Street for 1/2 block north of Deschutes Avenue.**

Most of the improved streets are in fair condition. There are a few areas on Elrod Avenue on the upper end, which have deteriorated in recent months and the intersection at 6th and Staats Streets also shows signs of deterioration. These two areas are in poor condition.

ANALYSIS

Arterials

There is only one arterial in the City of Maupin, US Highway 197. See Map 5. This state owned and maintained road serves as the main transportation corridor through the City. The 1999 Oregon Highway Plan classifies this highway as being of regional importance. US 197 carries a low volume of traffic. There are no other local streets that approach the improvement standards, traffic capacity, or existing traffic loading of US Highway 197. All of the City's streets feed onto US Highway 197. It also serves as the commercial core of the City for approximately 5 blocks through the center of town, and then in the lower end of the community on both sides of the Deschutes River bridge. There are no other roads that are likely to become classified as an arterial street in the foreseeable future given the slow to moderate growth rate of the City.





The downtown core area is provided with sidewalks and curbs on both sides of the streets from approximately Burnham Avenue to just below 3rd Avenue at the lower end of the downtown core area. US Highway 197 serves as the primary access to both the upper and lower portions of the town and is the main carrier of foot traffic from the school to the upper and lower portion of the City.

Collectors

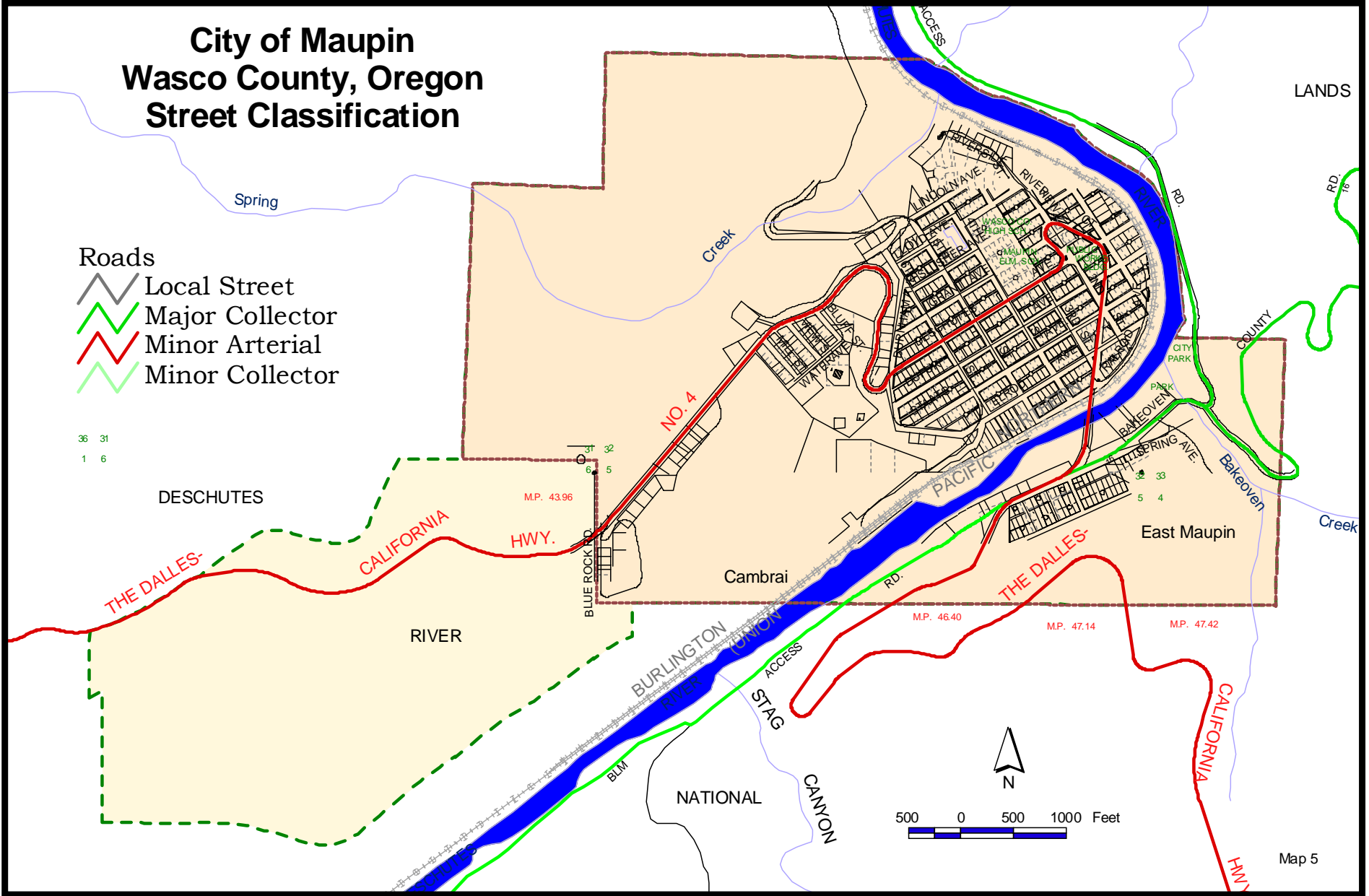
There are three streets that arguably serve as collectors. See Map 5. Fourth Avenue is the street that serves the school and, for approximately 2-1/2 blocks, serves as a collector of local traffic. It receives the majority of the local daily city traffic as people traverse to and from the elementary and high schools. The street is improved with a 46-foot pavement width with 5 feet of sidewalks on both sides. To control speeds in the vicinity of the schools, speed bumps were installed. The speed bumps have been in place for many years.

The second collector is Elrod Avenue that serves as a local collector street for the middle level to the lower area of town. This is a slightly shorter way of getting to the lower part of town by dropping over the 6th Street connection to Elrod and then drive down to US Highway 197. It saves approximately 45 to 50 seconds over normal travel time on US Highway 197. The street is shown on the inventory as 22 feet of pavement, no sidewalks or curbs, and is not heavily used by pedestrians, although some members of the TAC have indicated that there is some foot traffic on this street.

City of Maupin Wasco County, Oregon Street Classification

- Roads
-  Local Street
 -  Major Collector
 -  Minor Arterial
 -  Minor Collector

36 31
1 6



The third collector in the City is Bakeoven Road. This is based on the amount of traffic it receives during the summer months. Bakeoven Road serves the Maupin City Park on the river. The traffic counts show that the traffic drops below 100 ADT just beyond the park at the City Limits. The traffic on the street from the park to US Highway 197 is very high during the summer months. Unfortunately, there is no specific traffic count available. Bakeoven Road has 23 feet of pavement with no sidewalks and curbs. Interestingly, the City requested the County place concrete road barriers along both sides of the road to eliminate on-street parking in this area. The summer of 1999 will be the first season to try this. It is anticipated that this will reduce the traffic congestion in this area significantly.

TRAFFIC FLOWS AND CAPACITIES

There are very few traffic counts available at the City. There are 1997 traffic counts on US Highway 197 which are available from the Oregon Department of Transportation. These are summarized below:

- .01 of a mile east of 4th Street on Deschutes 1,200 ADT.
- At the west city limits, 1,200 ADT.
- At the .01 mile west of 6th Street, 1,400 ADT.
- South of Bakeoven Road, 570 ADT.
- South of the south city limits line, 490 ADT.

The County has only one recording of traffic volume at Bakeoven Road, just outside of the city limits. The count was taken in May 1995. The county recorded 114 ADT. Clearly most of the traffic in the City is locally generated. Traffic flows on residential streets are essentially low volume and local in nature. The City was platted, with Deschutes (US Highway 197) being the main arterial through town. This leaves three blocks of residential development on either side of Deschutes. There are only three streets running in a north-south direction that connect to Deschutes that collect traffic. Each north-south street serves approximately 36 residential lots. At ten automobile trips per day, on average, that would generate approximately 360 cars per day. None of these streets approach capacity at the present time.

TOPOGRAPHY

The primary inhibiting factor to development of many of the platted streets in the City is due to the steep topographical conditions that exist. The topography map, Map 3, was prepared by overlaying a USGS Quad Sheet on a base map of the City. The USGS Quad sheet shows the contour lines at 40 intervals. As can be seen, the lower areas of blocks adjacently to the railroad tracks and the river are extremely steep, and many of the streets below Elrod and below US Highway 197 on the east have never been constructed.

The topography creates another set of problems. The large amount of people traveling through the City Park to raft the Deschutes River during the summer would be an economic boom to the city if there were a way to easily transport them up to the main commercial area. To overcome its topographic limitations and capture tourist trade, the lower area of the City has been designated Recreational Commercial (RC). Local entrepreneurs are just now recognizing the

potential economic opportunity of servicing visitors using City Park to access the river. They are slowly transitioning their enterprises to offer goods and services to the foot traveler from the park.

RIGHT-OF-WAY NOT NECESSARY TO CITY NETWORK

There are a number of right-of-ways that are platted in the City, which are unimproved. The map in Exhibit 2 illustrates those clearly. These streets, while platted, are not practical to build and the properties, which would be served by them, have developed other means of access. However, many of the unimproved streets may still serve the community in other ways, including pedestrian access, utility right-of-ways, and limited access for special circumstances i.e., emergency vehicle turnarounds. Care should be taken to investigate all of the possibilities before unimproved right-of-way is vacated.

CONNECTIVITY

The three levels of the City are connected solely by US Highway 197 which takes a circuitous path from north to south by entering through the southwest corner of the City and exiting through the south central portion of the City. It is this transportation corridor that provides the only realistic vehicular connection for commuting from one section of the City to another. Generally activity centers are provided with adequate means of access for automobiles and, in most cases, pedestrian and bicycle traffic. As noted above, there is a problem transporting foot traffic from the City Park on the Deschutes River to the upper commercial core area.

On site investigations indicate a number of shortcuts or pathways which school children have made over the years to walk to and from the school. This includes a short cut from the upper level to the middle level of town and below the school property as well.

In-lieu of providing sidewalks along one or both sides of US 197 through town, consideration should be given to providing pedestrian pathways either in the form of sidewalks, or other type of pathway i.e. paved walkway, or designated travel paths on adjacent collector and local streets.

It is suggested the City initiate an improvement program to construct a series of sidewalks on the most logical paths through the City, see Map 6. The City should consider either a Local Improvement District or a general funded project to complete a walk way system through the City.

CONFLICTS WITH ACCESS STANDARDS

The access standards adopted by the State of Oregon in the 1999 Highway Plan set forth-specific requirements for new streets, driveways, alleyways and other types of access to state highways and local roads. For the most part, the downtown core area of Maupin does not meet the access spacing standards for local streets and private drives. There is one service station and one repair facility whose service aprons is generally full lot width driveway cuts that would not meet state standards. There are at least two other sites with full driveway cuts that are not now used to service highway traffic. Deschutes (US 197) from Burnham to 3rd Street should be considered

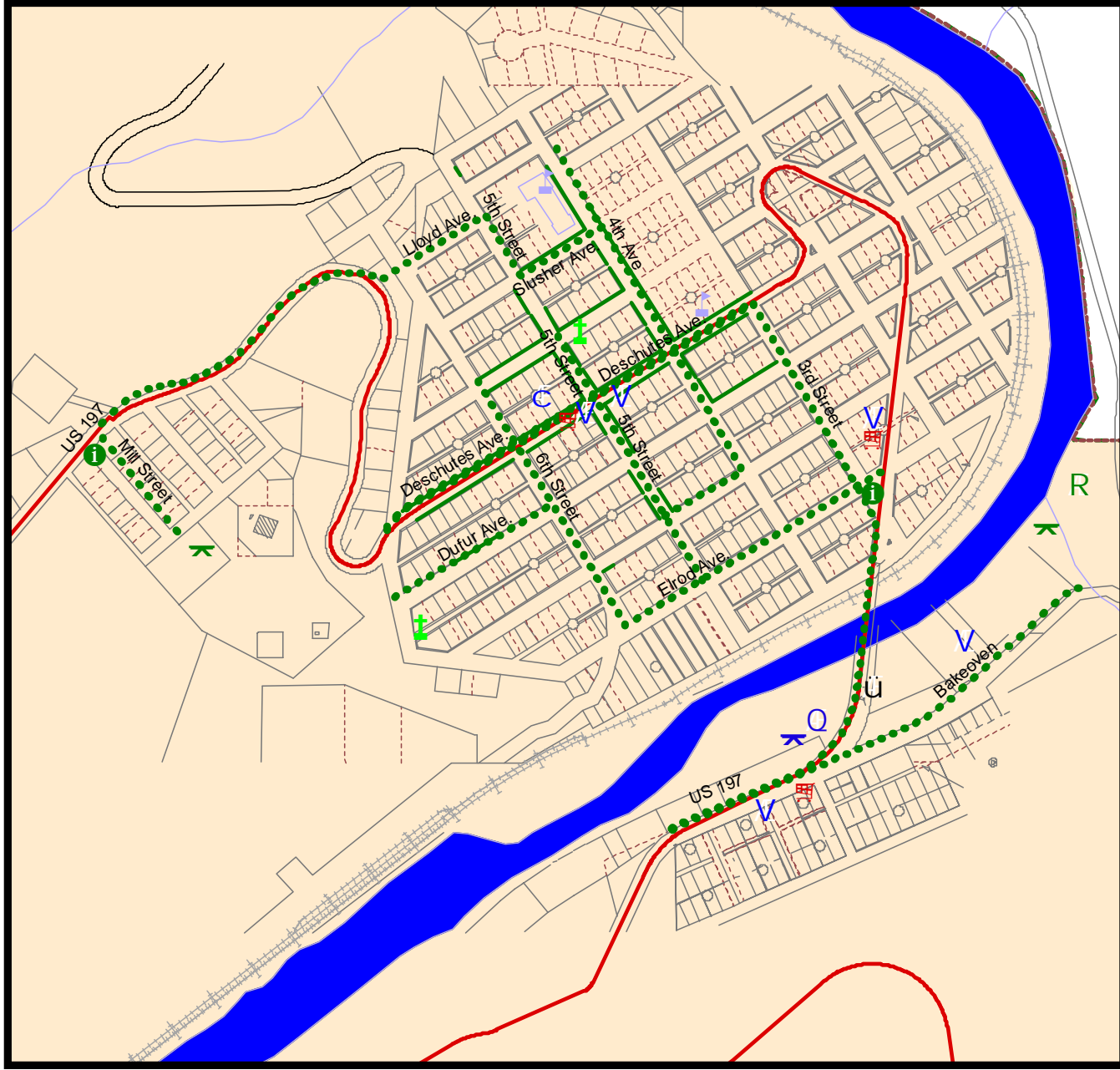
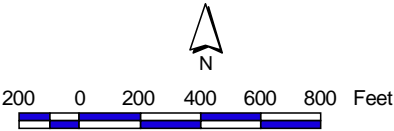
City of Maupin Local Street Network Plan Proposed Pedestrian Path Network

Roads
Minor Arterial

Pedestrian System
Prop. Pedestrian Path Network
Existing Sidewalk

Other
Railroad
River
Stream

Activity Nodes
 School
 Church
 Park
 Information Center
 Public RV Campground
 Public Library
 Visitor Parking
 Pvt. Picnic Area
 Pvt. Campgnd.
 Eating Estab.
 Grocery



for designation as a Special Transportation Area (STA) as provided for in the 1999 Oregon Highway Plan.

However, the upper lower areas of the town both have some existing commercial activities. There are no curbs in these locations and full width access points currently exist. As these properties are improved, access control will need to meet State access management standards.

SPECIFIC PROBLEM AREAS WITHIN THE CITY AND ITS URBAN GROWTH BOUNDARY

It must be understood that there is only one transportation route through the City. Because of the topography, it is unlikely that other routes will be provided. Therefore, US Highway 197 will continue as the primary transportation corridor for the foreseeable future. There is other transportation problems in the community.

Blue Rock Road

Other than the spacing of public and private access in the City that do not currently meet the standards of the 1999 OHP, there is a significant alignment issue where Blue Rock Road intersects US 197 at the extreme westerly side of the City Limits. Blue Rock Road is designated as a collector street and currently provides access to a dozen houses directly off US Highway 197. Its present access point to US Highway 197 is extremely steep and provides inadequate sight distance. There is considerable land to the west within the Urban Growth Boundary that can be developed. When this area is developed, the current problem at Blue Rock Road will become unacceptable. Some workable design solution must be found.

There are a number of property owners that are currently seeking development permits that could be effected by any solution developed to remedy this problem. One possible solution to correct the sight distance problem is to realign Blue Rock Road to run parallel to US Highway 197 for short distance to the east. Then, as the gradient allows, Blue Rock Road would turn 90 degrees and intersect the Highway. This solution would provide for both safer access and better sight distance. However, there are a number of private property owners involved and a general consensus will have to be accomplished to achieve any change in this situation. To resolve this issue is beyond the scope of this plan. A refinement plan will need to be prepared that look not only at the aforementioned solution, but any others that might be feasible prior to making a decision and selecting a preferred alignment for Blue Rock Road.

Development below Elrod Avenue

Over the years, the number of platted lots with legal access onto Elrod Avenue have been permitted for single-family residential development consistent with existing zoning and subdivision rules. The topography along Elrod is so steep that houses have been built considerably below Elrod. Consequently, the most practical way to access these residences has been via an alleyway between Elrod and Railroad Avenue. Railroad Avenue is not constructed, and because of topographic constraints is not likely to ever be built. The City must carefully assess additional development requests to assure fire protection and other public facilities can be adequately provided.

Downtown Parking

On-street parking is a significant problem in the Downtown Core area of Maupin from Burnham to 3rd. This problem becomes extremely acute in the summer months during the white water rafting season. There are several possible alternatives to ease this situation, including proper signage specifying on-street parking time limits coupled with better enforcement.

There is also the potential for increasing on-street parking spaces through the use of diagonal parking on some of the local streets immediately adjacent to Deschutes, including 6th Street on the lower side, 5th Street on the lower side, and 4th Street on the lower side. Fourth Street on the upper side near the school is already used for diagonal parking for school events. There are limited opportunities on the upper sides of 5th and 6th because of the number of curb cuts that currently exist.

Finally, expansion of the off-street parking provided below the Deschutes River Bridge will significantly reduce the on-street parking demand in the Downtown caused by white water rafters being shuttled to the rafting areas. While this expanded parking facility is privately owned, the limiting of on-street parking and code enforcement will help ensure its increased utilization.

Parking on Bakeoven Road

During the water-rafting season, even when there have been signs on both sides of Bakeoven Road indicating no parking; on-street parking has been a common and reoccurring problem. Recently the City requested Wasco County, who owns and maintains Bakeoven Road, to add concrete barriers along the edge of the road to preclude on-street parking. This has been done and these barriers will be in use for the first time this season.

Storm Drainage

Currently, the City of Maupin does not control storm water runoff through a system of above or underground storm drains. With the exception of the State Highway through the Downtown area, there are no curbs with gutters to control and concentrate the flow of storm water runoff. At the present time, local streets are configured to allow storm water to runoff in a way that keeps it from concentrating, and following the natural topography.

At the present time the Burlington-Northern Railroad right-of-way, at the base of the City, adjacent to the Deschutes River forms a natural barrier between the City and the River. There are two culverts, of unknown size, under the railroad right-of-way, which provide a limited amount of storm water discharge into the Deschutes River. One of the culverts is located near the City's wastewater treatment plant. The other culvert is located upriver from the US Highway 197 Deschutes River Highway Bridge.

The installation of a storm drain system, either in the existing City or in new development would result in a substantial cost to the residents of Maupin. It would more than double the cost to

improve the existing streets in Maupin, and add approximately 1/3 to the cost of new development.

In addition, recently Coho salmon has been classified an endangered species. The Deschutes River has been identified as a waterway used by migrating Coho. Consequently, in the future those cities that manage a storm drainage system and do not currently treat their storm water runoff through their sewer treatment plant may be required to do so. This could mean for a city like Maupin, expansion of their existing sewer treatment plant to accommodate the additional volume of water needing treatment before discharge into the Deschutes River.

In conclusion, given the implications for treatment and the cost to collect and manage storm water runoff, it is recommended that neither the existing development in the City, nor new development be redeveloped or developed with streets that have curb and gutter that collects and concentrates storm water runoff. To minimize the amount of impervious surface, and therefore storm water runoff, it is also recommended that local street widths in existing development and new development be kept to a minimum, e.g. 20-24 feet of paved surface.

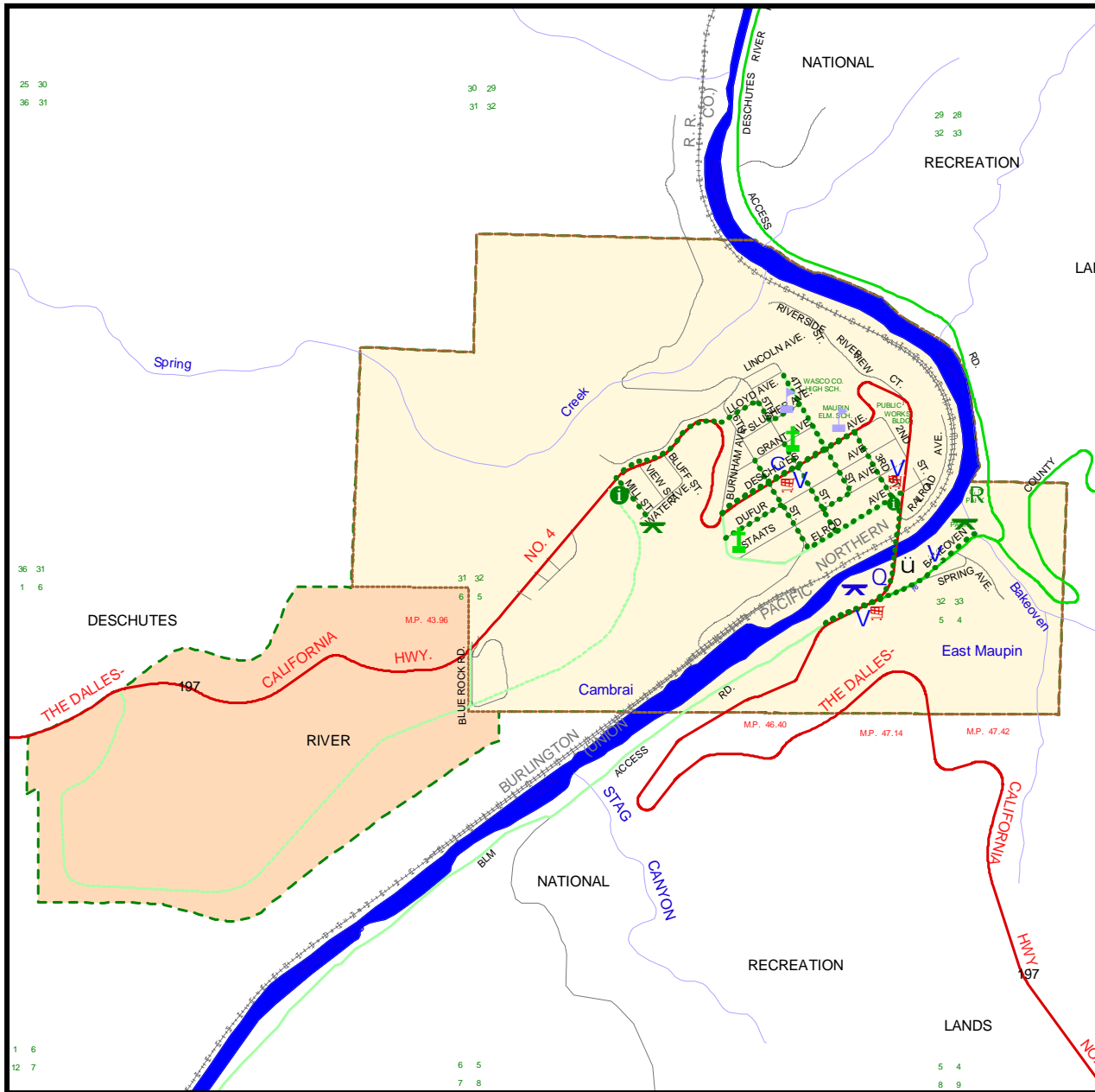
In the existing developed areas, future street improvements should be designed to maintain the existing storm water runoff patterns. In new developments, storm drainage should be accommodated through a system of either rear lot drainage swales or drainage swales adjacent to the street. The drainage swales would be direct storm water runoff to a detention pond located within the development. Storm water collected in the detention pond would also act as a sedimentation basin and aid in improving the quality of storm water runoff. Finally, storm water would be released from the detention ponds at the historic rate for the property - pre-development.

PROPOSED LOCAL STREET MASTER PLAN

Map 7 represents the Local Street Network Master Plan Map for the City of Maupin. The Master Plan graphically identifies the functional classification of streets, both existing and proposed within the city of Maupin and its urban growth boundary. Proposed streets are representational in nature and when development occurs their location may be adjusted as long as the intent for local street connectivity is maintained.

Map 7 does not show two components of the Local Street Network Master Plan. The Special Transportation Area (STA) in the downtown and the bicycle network. The plan proposes getting designated as an STA, US 197, Deschutes Avenue, from Burnham to 3rd Street. As a follow-up to this planning process, a design plan will need to be prepared for the STA in cooperation with the City, business owners, and the Oregon Department of Transportation. The City as a separate plan document will adopt a plan for the STA.

Finally, bicycle travel will be accommodated on all local and collector streets by sharing the roadway with motor vehicles. On US 197, the Plan calls for bicycles to be accommodated on the shoulder of the highway. Within the city and urban growth area, to accommodate bicycles on the highway, the planned shoulder width is 6 feet. Out side the urban growth boundary, the minimum shoulder width to accommodate bicycles will be 4 feet. Bicycle travel through the STA will be incorporated in the overall design for the STA.



City of Maupin Local Street Network Master Plan

Roads

- Local Street
- Major Collector
- Minor Arterial
- Minor Collector
- Proposed Minor Collector

Other

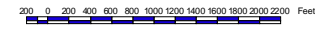
- Railroad
- River
- Stream
- Pedestrian Path Network

Boundaries

- City Boundary
- Urban Growth Boundary

Activity Nodes

- School
- Church
- Park
- Information Center
- Public RV Campground
- Public Library
- Visitor Parking
- Pvt. Picnic Area
- Pvt. Campgnd.
- Eating Estab.
- Grocery



STREET DESIGN STANDARDS

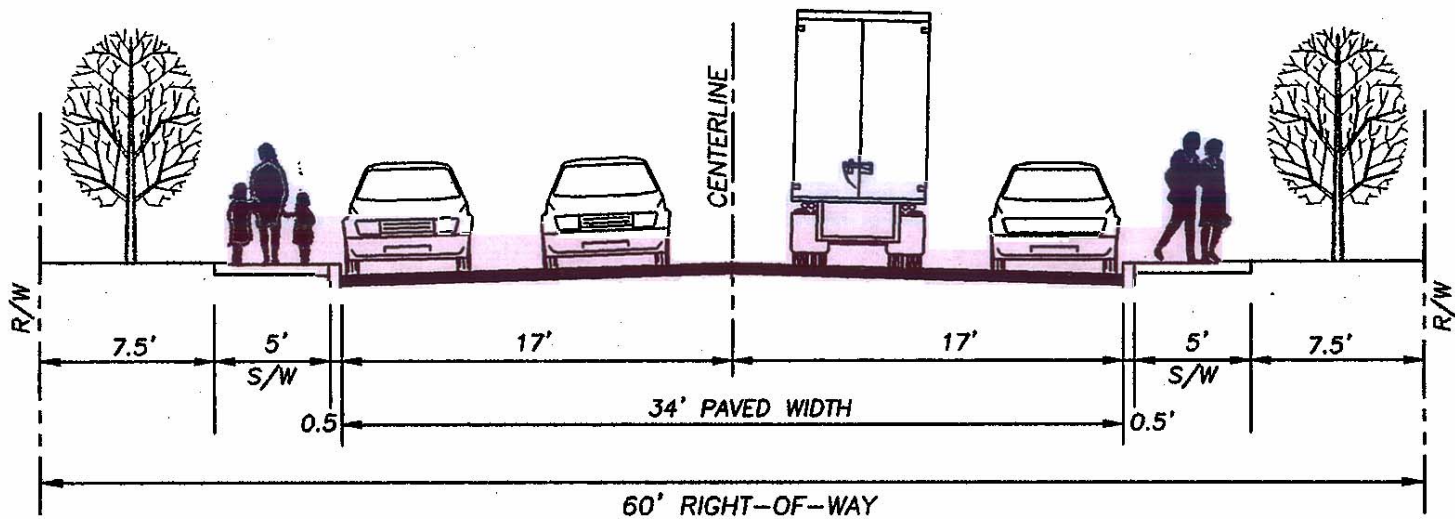
Typically for small communities in Eastern Oregon there are four street types for which design standards are prepared. These are arterials, collectors, residential streets, and sometimes alleyways. Noted earlier in the report, the only arterial through the City is the State owned and maintained highway, US 197. There is little likelihood for another arterial to be constructed in the City in the foreseeable future. The Collector Street is also a classification of streets that will not be a major influence for future development in the City in the foreseeable future. The one exception is the potential for Blue Rock Road on the west edge of the current City Limits becoming a collector as the property in the western Urban Growth area develops. Therefore, the design standards that are established by this planning effort will focus primarily on local residential streets.


The City's existing street condition inventory indicates that very few streets in the City are developed to a specific standard (with the exception of the newly paved streets of Water and Bluff on the heights). The only street within the City of Maupin developed to any standard is US Highway 197 in the downtown core area with a full 50 feet of pavement with curbs and sidewalks. Portions of Dufur Avenue, approximately 3 blocks long adjacent to the downtown core area, and small portions of 4th, 5th and 6th Streets about a half a block off of each side of Deschutes Avenue are also developed to a wider improved width. The remainder of the local street are improved to something considerably less than any typical urban street standard.

A residential street in Maupin is generally improved with 16 feet of pavement with gravel or dirt shoulders. Recent pavement designs approved in the Heights area of the City required 34 feet of pavement with curbs on both sides. *(It is noted a lot of time was involved in obtaining the easements for drainage for this particular project because of the curbing.)* Based on existing practices, through the development review process, the City has been requiring a 34 foot improved width with curbs, with sidewalks to be added. (Drawing 1)

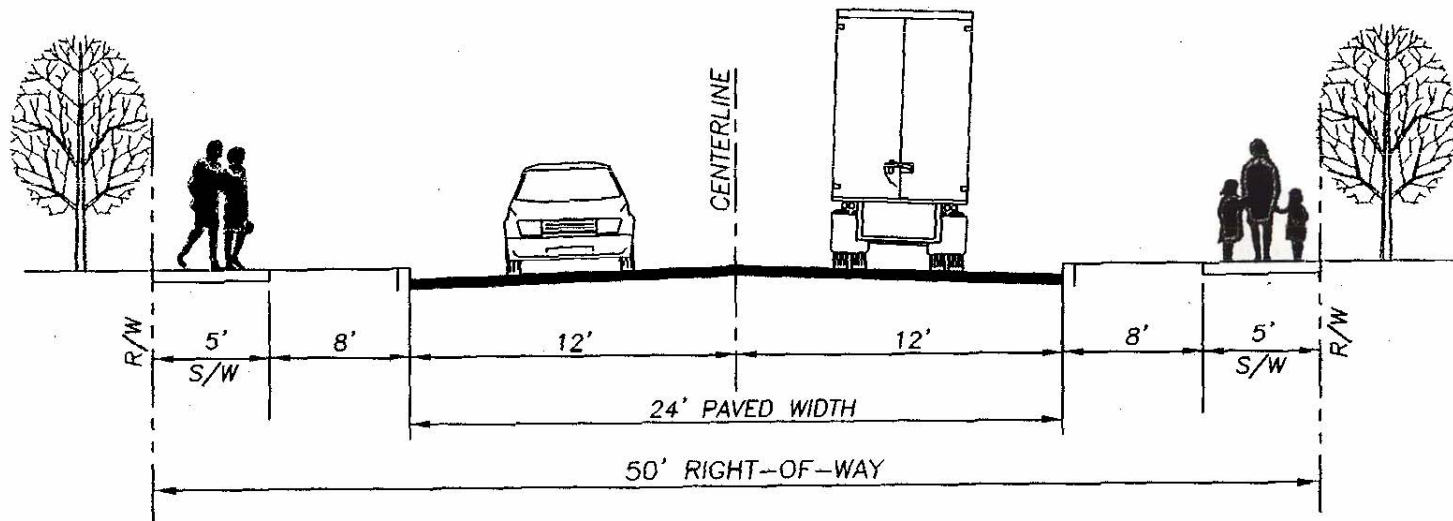
Recent trends in land use planning across the state have shown a more traditional concept of street development to be more beneficial to the community. Neo-traditional planners are recommending narrower streets and right-of-ways for residential development. The impact of narrower streets has many beneficial assets to the community in both the short and long term.


- Narrower right-of-ways allow the reduction in impervious surface, resulting in less runoff, and street improved widths mean less development cost for the developer and less acquisition cost for the consumer.
- Narrower streets tend to have a calming effect on traffic speeds leading to a safer residential environment.
- Narrower streets have the effect of adding to a sense of community for local residents.
- Narrower streets mean less operation and maintenance cost for the city.
- More property stays on the tax roles.



Date	NO.	Revisions	
60' RIGHT-OF-WAY TYPICAL STREET SECTION CITY OF MAUPIN			
Calc.	Scale	TENNESON ENGINEERING CORP. CONSULTING ENGINEERS  409 LINCOLN STREET THE DALLES, OREGON 97058 641-296-9177 FAX 641-296-6657	
Survey	Date		
Drawn	Sheet		
App.	Work Order No.		
	NONE	1 = 8'	4/22/99
	S.D.H.	1 of 2	
		9331st	

DRAWING 1



Date	NO.	Revisions	
50' RIGHT-OF-WAY TYPICAL STREET SECTION CITY OF MAUPIN			
Calc.	Scale 1" = 8'	TENNESON ENGINEERING CORP. CONSULTING ENGINEERS  409 LINCOLN STREET THE DALLES, OREGON 97058 541-296-9177 FAX 541-296-6657	
Survey NONE	Date 7/08/99		
Drawn S.D.H.	Sheet 2 of 2		
App.	Work Order No. 9331st		

DRAWING 2

A cost comparison between construction of a 34-foot street with curbs and a 28-foot street with gravel parking is shown below in Table 1. A 28 foot street gravel shoulders for off-street parking with street trees and detached pedestrian pathway is shown in Drawing 2.

TABLE 1			
STREET CONSTRUCTION COST COMPARISON			
for the City of Maupin			
28' Wide Street Without Curbs			
Base Rock (7" of 1-1/2" minus)	@ \$24/cy	=	\$14.82/l.f.
Leveling Rock (2" of 3/4" minus)	@ \$25/cy	=	\$4.52/l.f.
Asphalt (3" of ODOT "C")	@ \$45/ton	=	\$24.07/l.f.
Total Cost/Running Foot		=	\$43.41/l.f.
34' Wide Street With Curb and Sidewalk			
Base Rock (7" of 1-1/2" minus)	@ \$24/cy	=	\$17.93/l.f.
Leveling Rock (2" of 3/4" minus)	@ \$26/cy	=	\$5.48/l.f.
Asphalt (3" of ODOT "C")	@ 45/ton	=	\$29.22/l.f.
Concrete Curb	@ 9.50/lf.	=	\$19.00/l.f.
Sidewalk	@	=	\$27.50/l.f.
Total Cost/Running Foot		=	\$99.13/l.f.
<i>(If curb/gutter is used add \$6.00/l.f.)</i>			

Assumptions:

- 1) *This does not take into account any earthwork or grading of subgrade*
- 2) *Rock and asphalt quantities are "neat-line" solid, in-place volume.*
- 3) *Curb is standard 6" x 16" high concrete and sidewalks are 4" thick and 5' wide. Both of these quantities include both sides of street and cost includes rock base.*
- 4) *Unit costs are based on B.O.L.I. wages and similar sized projects in the recent past. No warranty is made as to their accuracy.*

As can be seen, the 28-foot street is considerably more cost effective than the 34-foot street given the low density and low traffics volumes on local streets.

STREET DESIGN ISSUES

Residential Design Widths

One of the issues facing the City in adopting a street design standards plan is the distinction between existing development and proposed development in the form of new subdivisions or partitions. The immediate concern of the City in undertaking of this project was to develop some street standards for the existing platted development in the middle area of the community. These existing streets, as noted in the inventory, vary from 12 to 22 feet in width, some have curbs,

some have sidewalks, and some have neither. The City's intent is to establish an uniformed standard and use that as the specification for future street improvement projects.

At the same time, uniform standard needs to be set for new development which will be occurring in the City and plans for which are currently being prepared. It would appear that there is a fairly simple solution. The use of 24 foot streets in the existing portion of the City would provide a vast improvement over what is currently there and allow on-street parking on the shoulders, as currently is practiced, and allow for the provision of pedestrian pathways or sidewalks as the need warrants. On new developments, a 24-foot street would also work for residential development.

Based upon discussions with community members the TAC, ODOT and others, an improved street standard of 24 feet in width appears to best fit City's needs for residential streets. It is noted that while the Subdivision Ordinance does contain specific street standards, there are no requirements for on-site storm drainage control. It would appear that by amending the Subdivision Ordinance to adopt specific new street standards including construction details, the City could also require that new developments provide for on-site detention to limit off-site drainage and the problems associated with storm water runoff.

Construction Standards

The technical drawings for residential streets access ways and alleyways are contained as Exhibits 3, 4 and 5 in the Appendix. These show the actual construction details for these types of streets. These were used to develop the cost comparisons for local streets as described in Table 1. As indicated earlier in the plan, residential streets will be required to be 24 foot of improved width. Alleyways will have a requirement for 12 feet of improved all weather surfaces including gravel. Access ways are those streets, which will provide primary access to residential properties that have alleyway right-of-way width. In those instances, access ways shall be required to have 16 foot of improvement width and require pavement.

OTHER ISSUES

There were a few other issues that surfaced during the preparation of this plan including vehicular parking both on or off street, abandoned or inoperable vehicles, and RV parking or storage on public streets. The following piece provides some potential solutions to this particular problem.

Vehicular Parking

An issue identified by the Technical Advisory Committee in evaluating street standards is the issue of on and off street parking. In the past, the community has had a problem with:

- 1) Individuals parking for long periods of time large recreational vehicles (RVs) on the street creating circulation and safety problems;
- 2) Individuals parking one or more inoperable vehicles either on the street or on their property creating circulation and safety problems; and

- 3) Individuals violating the 2-hour parking limit on Deschutes Avenue (US 197) creating congestion and a parking shortage for businesses in the Downtown.

Because of lack of manpower and financial resources, the Wasco County Sheriff's Office has not been able to adequately enforce local ordinances regarding the above mentioned problems. Consequently, auto, pedestrian and bicycle circulation on local streets has been compromised and made less safe and attractive as means of local travel. To remedy the above situation and enhance local auto, pedestrian, and bicycle circulation on local streets, and in the Downtown, the following is recommended:

- 1) *That the Maupin City Council appoints a City Official as the Code Enforcement Officer for the City.*
- 2) *That the Mayor of Maupin have the Wasco County Sheriff deputize the Maupin Code Enforcement Officer enabling them to issue citations for violation of City ordinances dealing with on and off street parking, especially as it relates to the above three items.*
- 3) *That the Maupin City Council, by ordinance establishes minimum fines for each infraction of the City ordinances regarding on and off street parking of vehicles.*
- 4) *That the Maupin City Council set aside 1/2 of all fines collected to help pay for the Code Enforcement Officer.*

Recommended Ordinance Language:

- 5) *One or more inoperable and/or unlicensed vehicles parked on a public right-of-way or on private property outside an enclosed structure shall be deemed a public nuisance.*
- 6) *Recreational vehicles, including campers, fifth-wheel trailers, motor homes, boats, snowmobiles, and rafts shall be allowed to be parked on the public right-of-way for 24 (or 48) hours only. Exceeding that time period will constitute a public nuisance.*

PRIORITIZATION OF IMPROVEMENT PROJECTS

It is difficult to make an absolute priority list, but would appear that the first streets which should be improved are those which are directly off of Deschutes Avenue and the Downtown Core area.

6th Street, one block north and one block south should be improved and diagonal parking may be appropriate on the south side of the Deschutes on the west side of 6th Street. 5th Street could be improved both north and south of Deschutes Avenue, although, it is noted half block of 5th Street on the south side has been improved. As noted in the meeting last week, 5th Street did not appear to be appropriate for diagonal parking at least on the north side. On the south side, at least for a half block, might be used on the east side of the street next to the tavern. 4th Street is already improved to the school the full width and the south side are improved to 46 feet.

Diagonal parking might be possible on the east side of 4th Street between Dufur and Deschutes. As noted in the report, there are two areas of maintenance, upper end of Elrod Avenue, and the intersection of 6th and Staats that are going to need at least some maintenance in the near future.

Because of the lack of existing pedestrian traffic ways, the City might look at City wide projects of improving the pathways as the next priority item particularly along Elrod Avenue and perhaps 3rd from Deschutes to Elrod.

FUNDING

There are a variety of methods to fund street improvement projects. The most common is the development requirements for new subdivisions or partitions to require the developer to construct the streets to meet City standards as part of their improvements. Thus, when the City takes over the operation and maintenance of the street system in the new development, when the final plat is accepted. The streets meet existing City standards. The costs are part of the purchase price of the lots.

Within existing development the most common method to improve streets to City standards is the Local Improvement District (LID). In a Local Improvement District, the homeowners agree to pay on a front foot or ownership basis for the improvements in front of their property. The City, in effect, acts as a general contractor performing the administration, advertising for bids, inspection, and so forth. Local Improvement Districts are not very common in small communities because of the reluctance to incur additional cost by the homeowner for such improvements.

The popular mechanism for street improvement projects is the off-system grant program sponsored by the Oregon Department of Transportation. This allows small communities up to \$25,000 worth of construction dollars for small street improvements in the community on streets which are not on the state highway system. Unfortunately, \$25,000 does not go very far. There are other grant programs that the City should be aware of and be able to apply for. The city is encouraged to maintain open lines of communication with the Oregon Department of Transportation representatives.

IMPLEMENTATION

In order to implement the recommended street design standards contained in this plan, the City will need to amend its Land Use Planning documents including the Comprehensive Plan, the Zoning Ordinance, and the Subdivision Ordinance. This Local Street Network Plan should be adopted as part of the Goal 12 element of the City's Comprehensive Plan and specific policies should be added to that policy element. What follows are the recommended policies for the Comprehensive Plan together with the recommended amendments to the Zoning and Subdivision Ordinances for the City's review.

RECOMMENDED COMPREHENSIVE PLAN POLICIES

The Maupin Comprehensive Plan policies should clarify the approval process for different types of transportation projects. The following policies are recommended to be adopted as additions to Part VII, Utilities of the Comprehensive Plan (page 72):

- 7) *All development proposals, plan amendments, or zone changes shall conform to the*

- adopted standards of this plan element.*
- 8) *The Goal 12 Element is a component of the Utilities element of the Maupin Comprehensive Plan. It identifies the general location and specifications of transportation improvements. Changes in the specific alignment of proposed public roads shall be permitted without plan amendment if the new alignment meets the intent of the transportation network identified.*
 - 9) *Operation, maintenance, repair, and preservation of existing transportation facilities shall be allowed without land use review, except where specifically regulated.*
 - 10) *The City of Maupin shall consider the findings of ODOT's draft Environmental Impact Statements and Environmental Assessments as integral parts of the land use decision-making procedures. Other actions required, such as a goal exception or plan amendment, will be combined with review of the draft EA or EIS and land use approval process.*
 - 11) *For State projects that require an Environmental Impact Study (EIS) or Environmental Assessment (EA), the draft EIS or EA shall serve as the documentation for local land use review, if local review is required.*

Existing policy VII A.3 shall become policy 6 and be amended to read as follows:

- 12) *That roads created in subdividing or land partitioning shall be designed to tie into the existing road system and designed in accordance with the standards set forth in this plan Element.*

The following policies should be added to Part VII, Utilities, of the Comprehensive Plan to ensure coordinated review of land use applications affecting the highway:

- 13) *The City of Maupin shall coordinate with the Department of Transportation to implement the highway improvements listed in the Statewide Transportation Improvement Program (STIP) that are consistent with the Maupin Comprehensive Plan.*
- 14) *The City of Maupin shall provide notice to ODOT of land use applications and development permits for properties that have frontage or access onto a state highway.*

The following policies are recommended to be adopted in Part VII, Utilities, of the Maupin Comprehensive Plan to protect existing and planned transportation facilities:

- 15) *The City of Maupin shall protect the function of existing and planned roadways as identified in the Local Street Network Plan.*
- 16) *The City of Maupin shall include a consideration of a proposal's impact on existing or planned transportation facilities in all land use decisions.*
- 17) *The City of Maupin shall protect the function of existing or planned roadways or roadway corridors through the application of appropriate land use regulations.*
- 18) *The City of Maupin shall consider the potential to establish or maintain accessways, paths, or trails prior to the vacation of any public easement or right-of-way.*
- 19) *The City of Maupin shall preserve right-of-way for planned transportation facilities through acquisitions, dedications, or setbacks.*

Existing policy VII A.1 shall become policy 13.

Existing policy VII A.2 shall be deleted.

PROPOSED ZONING ORDINANCE REVISIONS OR AMENDMENTS

Amend Section 4.8 – Off Street Parking Requirements to add B and C:

- B. One or more inoperable and/or unlicensed vehicles parked on a public right-of-way or on private property outside an enclosed structure shall be deemed a public nuisance.*
- C. Recreational vehicles, including campers, fifth-wheel trailers, motor homes, boats, snowmobiles, and rafts shall be allowed to be parked on the public right-of-way for 24 (or 48) hours only. Exceeding that time period will constitute a public nuisance.*

Article 4, Supplemental Provisions add Section 4.12 “Exempt Activities”. The following activities are exempt from requirements of this ordinance:

Transportation facilities and activities that include, but are not limited to:

- A. Normal operation, maintenance, repair, and preservation activities of existing transportation facilities.*
- B. Installation of culverts, pathways, medians, fencing, guardrails, lighting, and similar types of improvements within the existing right-of-way.*
- C. Projects specifically identified in the State Transportation System Plan as not requiring further land use regulation.*
- D. Landscaping as part of a transportation facility.*
- E. Emergency measures necessary for the safety and protection of property*
- F. Acquisition of right-of-way for public roads, highways, and other transportation improvements designated in the State Transportation System Plan except for those that are located in exclusive farm use or forest zones.*
- G. Construction of a street or road as part of an approved subdivision or land partition approved consistent with the applicable land division ordinance.*

Article 4, Section 4.13 - Nonconforming Access Features

- 1. Legal access connections in place as of [date of adoption] that do not conform with the standards herein are considered nonconforming features and shall be brought into compliance with applicable standards under the following conditions:*
 - a) When new access connection permits are requested;*
 - b) Change in use or enlargements or improvements that will increase trip generation.*

Amend Article 5, Section 5.8 - Design Standards, subsection A as follows:

Private and public streets shall have a minimum improved (paved) width of 24 feet to accommodate two-way traffic and on-street parking.

Amend Article 7, Amendments, to add a new Section 7.3 - Criteria for Amendments to read as follows:

- A. *The applicant for an amendment must show that the proposed change conforms to the Comprehensive Plan.*
- B. *A plan or land use regulation amendment significantly affects a transportation facility if it:*
 - 1. *Changes the functional classification of an existing or planned transportation facility;*
 - 2. *Changes standards implementing a functional classification system;*
 - 3. *Allows types or levels of land use that would result in levels of travel or access what are inconsistent with the functional classification of a transportation facility; or*
 - 4. *Would reduce the level of service of the facility below the minimum acceptable level identified in the Transportation System Plan.*
- B. *Amendments to the comprehensive plan and land use regulations which significantly affect a transportation facility shall assure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the Transportation System Plan. This shall be accomplished by one of the following:*
 - 1. *Limiting allowed land uses to be consistent with the planned function of the transportation facility;*
 - 2. *Amending the Transportation System Plan to ensure that existing, improved, or new transportation facilities are adequate to support the proposed land uses consistent with the requirement of the Transportation Planning Rule; or,*
 - 3. *Altering land use designations, densities, or design requirements to reduce demand for automobile travel and meet travel needs through other modes.*

Change existing Section 7.3 to 7.4

Change existing Section 7.4 to 7.5

Amend Article 7, Amendments, Section 7.5 - Amendment Hearings to add a new Subsection C to read as follows:

C. Notice to Affected Agencies

- 1. *The City of Maupin shall provide timely notice to ODOT regarding any land use*

action on or adjacent to a State transportation facility. Information that shall be conveyed to reviewers includes:

- a) Project location.*
- b) Proposed land use action.*
- c) Location of project access point(s).*

Additional information, which may be supplied to ODOT upon request, includes:

- a) Distances to neighboring constructed access points, median openings, traffic signals, intersections, and other transportation features on both sides of the property;*
- b) Number and direction of lanes to be constructed on the driveway, plus striping plans;*
- c) All planned transportation features (lanes, signals, bikeways, walkways, crosswalks, etc.);*
- d) Trip generation data or appropriate traffic studies;*
- e) Parking and internal circulation plans for vehicles and pedestrians;*
- f) Plat map showing property lines, right-of-way, and ownership of abutting properties; and*
- g) A detailed description of any requested variance.*

Amend Article 8, Administrative Provisions, and Section 8.3 - Site Plan Review to add the following to Subsection D immediately following the third sentence:

Dedication of land for roads, transit facilities, sidewalks, bikeways, paths, or accessways shall be required where the existing transportation system will be impacted by or is inadequate to handle the additional burden caused by the proposed use. Improvements such as paving, curbing, installation or contribution to traffic signals, construction of sidewalks, bikeways, accessways, paths, or roads that serve the proposed use where the existing transportation system may be burdened by the proposed use.

RECOMMENDED AMENDMENTS TO THE SUBDIVISION ORDINANCE

Under "Approval of Streets and Ways", amend Section 23 - Creation of Streets and Ways, to change the table in paragraph 6 to read as follows:

<i>Classification</i>	<i>Right-of-Way Width</i>	<i>Roadway Width¹</i>	<i>Roadway Surface</i>	<i>Shoulder Width</i>	<i>Shoulder Surface</i>
<i>Arterial Street</i>	<i>60-120 ft.</i>	<i>40-82 ft.²</i>	<i>paved</i>	<i>4-8 ft.</i>	<i>paved</i>
<i>Collector Street</i>	<i>50 ft.</i>	<i>24-28 ft.</i>	<i>paved</i>	<i>2-4 ft.</i>	<i>paved or gravel</i>
<i>Local Street</i>	<i>50 ft.</i>	<i>24 ft.</i>	<i>paved</i>	<i>2-4 ft.</i>	<i>paved or gravel</i>
<i>Radius for cul-de-sac turn-around</i>	<i>50 ft.</i>	<i>45 ft. Radius</i>	<i>paved</i>	<i>2-4 ft.</i>	<i>paved or gravel</i>

¹Roadway width excludes shoulder width.

²Roadway width can vary to accommodate passing lanes and/or left-turn refuge lanes.

Under "General Regulations and Design, amend Section 24 - Streets, to add new paragraphs 17, 18 and 19 to read as follows:

(17) Connectivity

- A. The road system of proposed subdivisions shall be designed to connect with existing, proposed, and planned roads outside of the subdivision as provided in this Section.*
- B. Wherever a proposed development abuts unplatted land or a future development phase of the same development, road stubs shall be provided to provide access to abutting properties or to logically extend the road system into the surrounding area. All road stubs shall be provided with a temporary turn-around unless specifically exempted by the City Council, and the restoration and extension of the road shall be the responsibility of any future developer of the abutting land.*
- C. Minor collector and local residential access roads shall connect with surrounding roads to permit the convenient movement of traffic between residential neighborhoods or facilitate emergency access and evacuation. Connections shall be designed to avoid or minimize through traffic on local roads. Appropriate design and traffic control such as four-way stops and traffic-calming measures are the preferred means of discouraging through traffic.*

(18) Pedestrian Pathways

- A. Whenever a proposed development abuts a pedestrian path as identified in the Local Street Network Plan, as a condition of approval, the development shall be required to construct the pedestrian path through and adjacent to the*

development.

- B. Except in the downtown area, the pedestrian pathway shall be detached from the street by an 8-foot strip. The pedestrian pathway may either be located within a street right-of-way or in a pedestrian easement.*
- C. The pedestrian pathway shall be constructed of either concrete or asphaltic concrete to be determined by the City Council at time of approval of a preliminary plat or minor land partition.*
- D. The pedestrian pathway shall have a minimum width of six (6) feet.*

(19) Bicycle Lanes

- A. On collector and local streets, bicycles shall share the roadway with motor vehicle traffic.*
- B. On arterial streets within the urban growth area, bicycles shall be accommodated on a paved 6-8 foot shoulder.*
- C. On arterial streets outside the urban growth boundary, bicycles shall be accommodated on a paved 4-6 foot shoulder.*

(20) Bicycle Parking

- A. Public building and facilities shall provide bicycle parking at a location visible from the public way.*
- B. Private commercial, industrial and recreational uses are encouraged to provide bicycle parking near the main entrance to the use.*

EXHIBIT 1

City of Maupin

PUBLIC INVOLVEMENT PLAN Local Street Network Master Plan-1998

The following is a draft plan to obtain citizen input and public involvement in the preparation of a Local Street Network Master Plan for the City. This is an outline of projected activities and methods of outreach to the general public.

Meeting #1 - Work Session (August 24, 1998)

- Initial meeting to establish Technical Advisory Committee (TAC) explain goals, objectives, and expectations of project.
- Identify preliminary timelines.

MEETING #2 - (October 27, 1998)

- Begin discussion of Local Street Inventory, including pavements, existence of curbs and gutters, sidewalks, storm drainage, types and conditions of pavement.

MEETING #3 - (November 17, 1998)

- Continue discussion of Local Street Inventory.
- Identify activity centers in community.
- Identify pedestrian and alternative transportation mode access.
- Identify and map topographical barriers to street network.
- Identify and map potential conflicts with Access Management Standards.
- Identify and map rights-of-way not necessary for the Street Network Master Plan.

MEETING #4 - (May 13, 1999)

- Review and discuss future street design standards and improvements.

- Review and discuss pedestrian and alternative mode transportation links to activity centers.
- Develop new or proposed links to the City Main Street enhancement.
- Traffic Control--Traffic Calming Needs
- Prepare rough cost estimates and identify funding sources.

MEETING #5 - (May 27, 1999)

- Review draft Local Street Network Master Plan.
 - Proposed Comprehensive Plan Policy Revisions
 - Proposed Zoning Ordinance Standards
 - Proposed Subdivision Ordinance Improvement Standards
- Recommendation to Planning Commission.

MEETING #6 - (June 1, 1999) PUBLIC HEARING

- Public hearing before City Planning Commission.

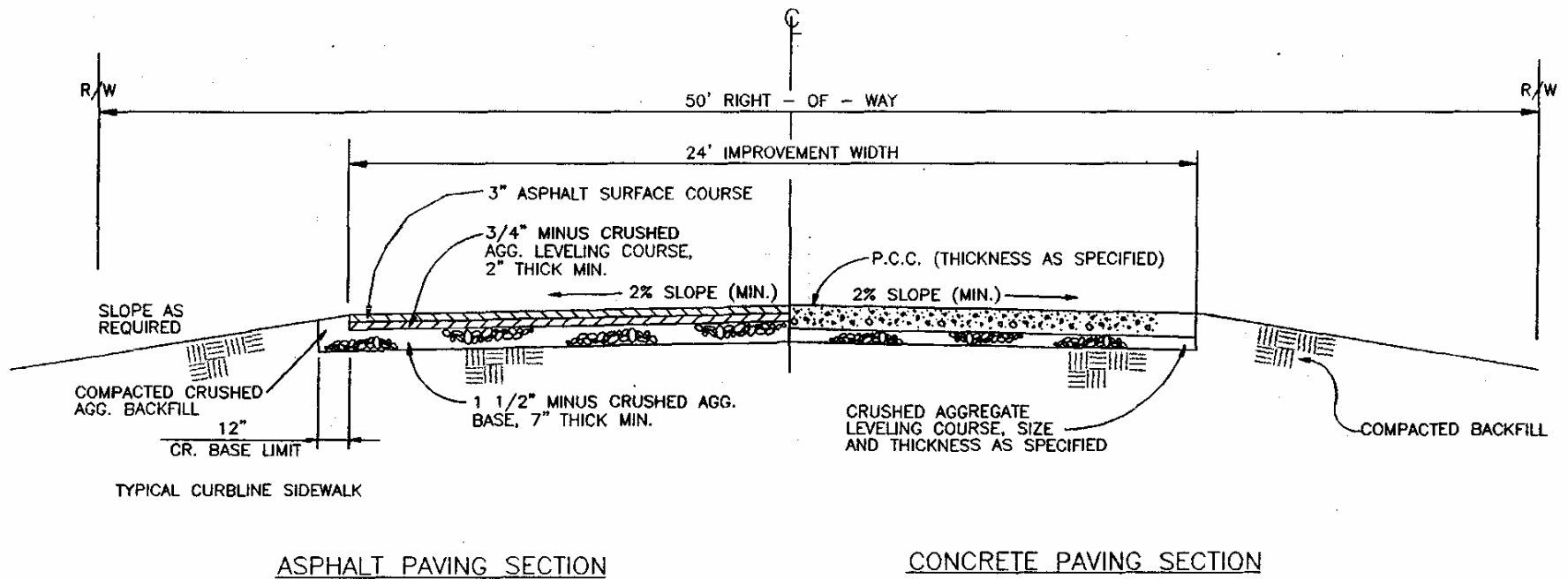
MEETING #7 - (June 23, 1999) PUBLIC HEARING

- Public hearing before City Council.

METHODS OF OUTREACH

- Workshops - Establish Technical Advisory Committee.
 - Post Public Notices
 - Notices and progress in monthly newsletter
- Public Hearings
 - Post Public Notices
 - Notices and progress in monthly newsletter
 - Notices in local newspaper
 - Notice to Property Owners as required

CITY OF MAUPIN STREET DESIGN STANDARDS RESIDENTIAL STREET CONSTRUCTION SPECIFICATIONS

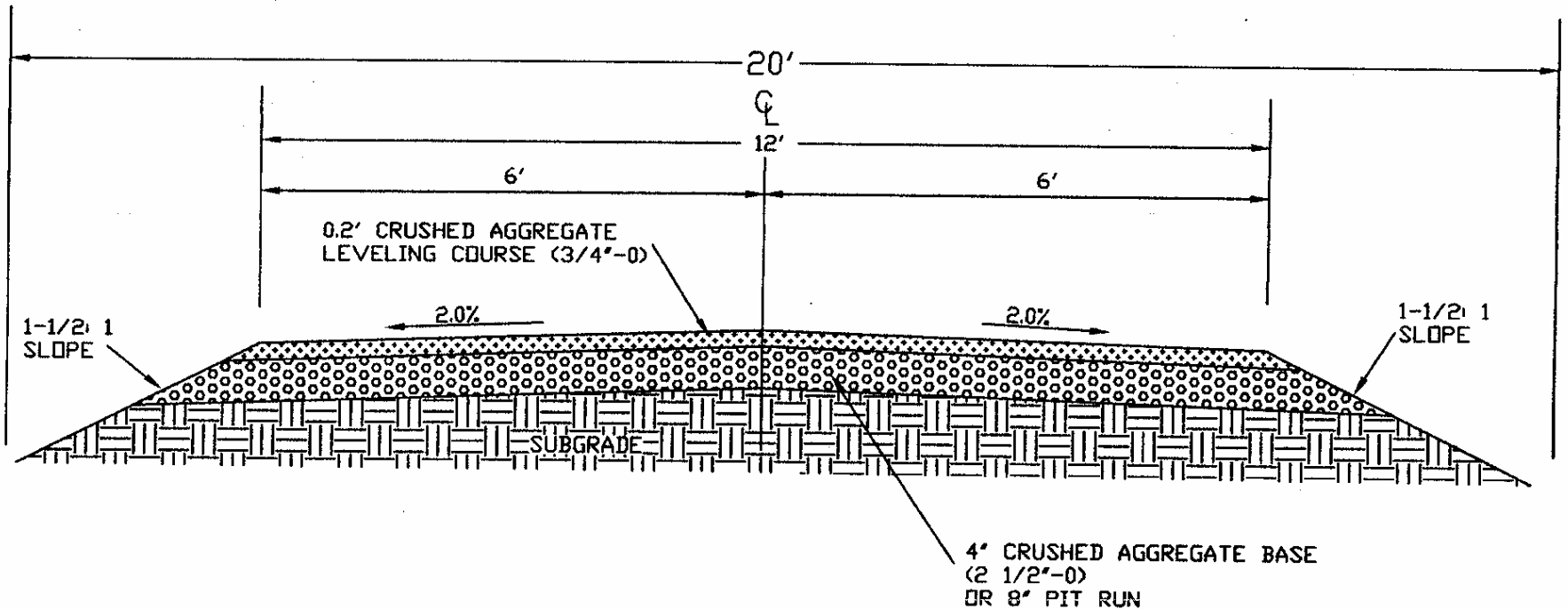


STREET SECTION DETAIL

DRAWING 3

CITY OF MAUPIN STREET DESIGN STANDARDS

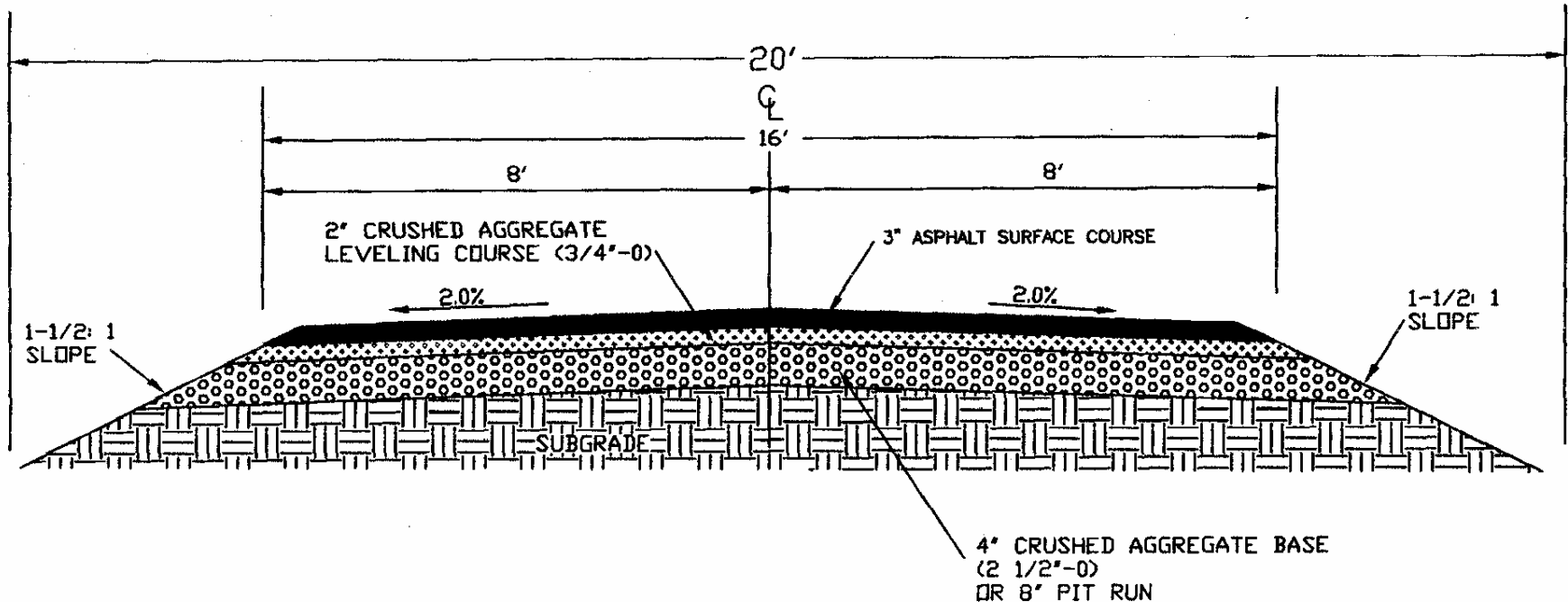
ALLEY CONSTRUCTION SPECIFICATIONS



DRAWING 4

CITY OF MAUPIN STREET DESIGN STANDARDS

ACCESSWAY CONSTRUCTION SPECIFICATIONS



DRAWING 5